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CHRISTIE, PARKER & HALE, LLP			EXAMINER	
PO BOX 7068			MAGLO, EMMANUEL K	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,240

Applicant(s)

WU, HAIJUN

Examiner

EMMANUEL MAGLO

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 4, 6-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 4, 6-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This Office Action is responsive to the amendment filed 04/13/2009.

Claims 1, 3 and 5 have been canceled.

Claims 2, 4, 6-11 have been amended.

Claims 12-25 have been added.

Claims 2, 4, 6-25 remain in the application.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection necessitated by Applicant's amendment to claims.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 2, 4, 6, 8-15, 17, 19-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Short et al. (US 7,197,556 B1) in view of Short et al. (US 7,194,554 B1).

Regarding claim 12, a *method for identifying user position, comprising:*

setting a first tag corresponding to each of broadband access devices, and a second tag corresponding to each of non-cascading ports in each of the broadband access devices, wherein the first tag and the second tag are employed to identify user positions (Short describes Fig. 4, and col. 7 lines 9-46: IEEE-standard protocol 802.1 Q provides VLAN at an access concentrator 92; at the access concentrator port and the network device will tag and communicate port numbers by assigning VLAN (Virtual Local Area Network) identifiers to the ports for the purpose of identifying the location or position of the subscriber), *and wherein: when a port receiving a message in a broadband access device among the broadband access devices is a cascading port, transferring the message received from the cascading port*, (fig. 3; the access concentrator 92 determines the port from which the packet was sent thus transfers the packet received from that port: col. 9 lines 12-17), *and when a port receiving a message in the broadband access device is a non-cascading port, inserting the first tag corresponding to the broadband access device and the second tag corresponding to the non-cascading port into the message received from the non-cascading port, and transferring the message with the inserted first tag and second tag*, (fig. 4, the access concentrator 92 is communicating in VLAN protocol, (VLAN (IEEE 802.1 Q) protocol: this ensures the VLAN a first tag); furthermore the VLAN ID is referenced to a specific port; col. 9 lines 12-31).

(US 7,197,556 B1) teaches the claim invention except explicitly that:
when a broadband access server receiving the message carrying the first tag and the second tag from the non-cascading port, identifying, by the broadband access server, user position according to the first tag and the second tag inserted into the message; wherein the broadband

access server knows through which broadband access device the user is connected according to the first tag, and through which port of the broadband access device the user is connected according to the second tag.

(US 7,194,554 B1) teaches, fig. 2, the operation of server 30, that receives a message from a host or a source computer. It is shown that server 30 examines the packet to determine the identity of the source (block 210). To determine the access rights of the source the attributes contained in the packet can include network information, source IP address, source port, link layer information, source MAC address, *VLAN tag*, circuit ID, destination IP address, destination port, protocol type, packet type, and the like. After this information is identified and stored, access requested from a source is matched against the authorization of that source (block 230): col. 12 lines 19-36).

It would have been obvious to a person of ordinary skill at the time the invention was made to implement (US 7,197,556 B1) with the teaching of (US 7,194,554 B1). The benefit is that a message received at the access server carrying the tags permits to selectably controlling host access to the network.

With regards to claim 6, (US 7,197,556 B1) describes *the first tag corresponding to the broadband access device is a VLAN Path Identifier (VlanPI) tag*, (VLAN (IEEE 802.1 Q) protocol), *the second tag corresponding to the non-cascading port in the broadband access device is a VLAN Channel Identifier (VlanCI) tag*, (the VLAN ID is referenced to a specific port: note that the port identifies that channel according to the associated database: col. 9 lines 40-45), *and said message received form the non-cascading port is an Ethernet message*, (fig. 4, Ethernet message 94 received at the port of the access device 92).

Regarding claim 2, (US 7,197,556 B1) describes *inserting of the first tag and the second tag comprises: the broadband access device independently inserting the first and the second tag into the message received from the non-cascading port, (by communicating the communicating in VLAN (IEEE 802.1 Q) protocol the first tag is thus set. Furthermore access concentrator determines the port from which the message was sent is determined and assigned VLAN ID (second tag) with reference to a specific port: col. 9 lines 12-45).*

Regarding claims 4 and 23, (US 7,197,556 B1) *describes reforming the received message received from the non-cascading port and deciding whether the message received from the non-cascading port is a data message or a control message, (col. 8 lines 22-29:)*

if the message received from the non-cascading port is a data message, removing the first tag and the second tag from the data message, checking binding relationship between the first and second tags, in the data message and the IP address of user, performing security checking, and transferring the qualified data message being checked, (col. 8 lines 29-40);

if the message received from the non-cascading port is a control message, after implementing an authentication to the user of the control message, checking binding relationship between the user's account and physical access position according to the first and second tags carried in the control message, performing user quantity control, and sending the first and second tags, the user account and password to an AAA server for authentication.

(US 7,197,556 B1) describes the claimed invention except explicitly *binding relationship between the user's account and physical access position according to the first and second tags carried in the control message, performing user quantity control, and sending the first and second tags, the user account and password to an AAA server for authentication.*

(US 7,194,554 B1) describes AAA server 30 , (fig. 1), that dynamically authenticates and authorizes user access, for selectively implementing and enforcing Authentication, Authorization and Accounting (AAA) of users accessing a network via a gateway device. Note fig. 2 describes the operation of the server: The authentication server has therein a source profile database comprising source profiles that represent users authorized to access said computer network, and compares the source data to said source profiles to determine if the user attempting to access the computer network can access the computer network. AAA services which authenticate users and offer those users varying degrees of authorization to utilize the accessed network

It would have been obvious to a person of ordinary skill at the time the invention was made to implement (US 7,197,556 B1) with the teaching of (US 7,194,554 B1). The benefit is that the input identification information includes a user name and password. Using this information, the network or service provider verifies that the user is entitled to access the network by determining whether the identification information matches subscriber information contained in a subscriber table (or database) that stores identification information for all users authorized to access the network. Where user input information matches subscriber data in the subscriber table, the user is authorized to access any and all services on the network. On the other hand, if the user input identification information fails to match subscriber data in the table, the user will be denied access to the network.

Regarding claims 8 and 17, (US 7,197,556 B1) describes the broadband access device comprises: *an IP DSLAM device*, (fig. 4 element 92).

Regarding claim 9, (US 7,197,556 B1) describes *the first tag corresponding to the first broadband access device is a VLAN Path Identifier (VlanPI) tag*, (VLAN (IEEE 802.1 Q)

protocol), *the second tag corresponding to the non-cascading port in the first broadband access device is a VLAN Channel Identifier (VlanCI) tag, (the VLAN ID is referenced to a specific port: note that the port identifies that channel according to the associated database: col. 9 lines 40-45), and said message received from the non-cascading port is an Ethernet message, (fig. 4, Ethernet message 94 received at the port of the access device 92),*

(US 7,197,556 B1) teaches the broadband access device is an IP DSLAM device, (fig. 4 element 92), except explicitly that the IP DSLAM device is composed of main control board, user interface board and backboard, and the method further comprises: the user interface board inserting the VlanCI tag into the received Ethernet message and the main control board inserting the VlanPI tag into the received Ethernet message,

(US 7,194,554 B1) teaches For example, the access concentrator can be a digital subscriber line access multiplexer (DSLAM) for signals transmitted via regular telephone lines, a cable head end (a Cable Modem Termination Shelf (CMTS)) for signals transmitted via coaxial cables, a wireless access point (WAP) for signals transmitted via a wireless network, a switch, or the like. Therefore It would have been obvious to a person of ordinary skill at the time the invention was made to implement (US 7,197,556 B1) with (US 7,194,554 B1) so that the (DSLAM) can be configured in different manners that would allow an interface to insertion of a tag into a received message.

Regarding claims 10 and 24, (US 7,197,556 B1) describes *the user is a general user (fig. 4, the user/subscriber or portable computer user such as users in hotels, airports and other locations where the remote portable computer user may reside).*

Regarding claims 11 and 25, (US 7,197,556 B1) describes *the second tag corresponding to the non-cascading port in the first broadband access device is a VLAN Channel Identifier (VlanCI) tag, and wherein the user with an inserted tag is a user with a private tag of internal network, and the information of the private tag of internal network is encapsulated in the VlanCI tag*, (fig. 5, internal network is formed by hotel room 3210; At the DSL modem a DSL header is attached to the packets, resulting in the DSL/Ethernet/IP packet 118).

4. Claims 7, 16 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Short et al. (US 7,197,556 B1) in view of Short et al. (US 7,194,554 B1) and further in view of Matsufuru (US 2003/0081625 A1).

Regarding claims 7 and 16, *the first tag and the second tag are encapsulated in a fixed encapsulation format and wherein the fixed encapsulation format sequentially comprises: destination Media Access Control (MAC) address, source MAC address, type of Ethernet VlanPI tag, VlanPI, type of Ethernet VlanCI tag, VlanCI, type of data message, data being transmitted, and checking field*.

(US 7,197,556 B1) and (US 7,194,554 B1) describe the claimed invention: IEEE 802.1Q standard frame is described, except explicitly that the descriptions do not show sequentially the frame as recited. Examiner take official notice the IEEE 802.1Q standard frame is well known in the art. In addition Matsufuru describes the sequence as shown in fig. 2: the packet consists of a destination address DA of 6 bytes, a sender address SA of 6 bytes, a tag protocol identifier TPID of 2 bytes, tag identification information TCI of 2 bytes, a length/type information LEN/TYP of

2 bytes, MAC (media access control) client/data DATA having a variable length of 46 to 1500 bytes and a frame/check sequence FCS of 4 bytes.

Regarding claims 13 and 19, (US 7,197,556 B1) describes

a broadband access device, comprising: one or more cascading ports, (fig. 4 access concentrator DSLAM 92, the concentrator have at least one port), and one or more non-cascading ports, wherein a first tag is provided for identifying the broadband access device, and a second tag is provided for identifying each of the non-cascading ports, and the first tag and the second tag are employed to identify user positions, (fig. 6 step 160 the message is transmitted through a specific location or port: location-based identification may also be embedded within another network device, such as an access concentrator or a router, or the commands that define location-based identification can be stored on a PCMCIA card that can be executed by one or more hosts in order to identify the ports from which the hosts access the network system), and the broadband access device is capable of receiving a message from one of the cascading ports, and transferring the message received from the cascading port, (fig. 7 step 200-220), the broadband access device is capable of receiving a message from one of the non-cascading ports, inserting the first tag, (fig. 7 step 230), corresponding to the broadband access device and the second tag corresponding to the non-cascading port into the message received from the non-cascading port, and transferring the message with the inserted first tag and second tag for identifying user position, (fig.8 step 300-350).

Furthermore with regards to claim 19, (US 7,197,556 B1) describes the plurality of broadband access devices and a broadband access server, (figs. 1 and 4).

Regarding claim 14, *the first tag corresponding to the broadband access device is a VLAN Path Identifier (VlanPI) tag, ((US 7,197,556 B1)note fig. 4 IEEE 802.1Q defines the VLAN path id), the second tag corresponding to the non-cascading port in the broadband access device is a VLAN Channel Identifier (VlanCI) tag, (the VLAN port identifier), and the message received from the non-cascading port is an Ethernet message, (see Ethernet message 118 received at the DSLAM).*

Regarding claim 15, *the first tag and the second tag are encapsulated in a fixed format, ((US 7,197,556 B1): IEEE 802.1Q standard frame).*

Regarding claim 18, (US 7,197,556 B1) describes *the first tag corresponding to the first broadband access device is a VLAN Path Identifier (VlanPI) tag, (VLAN (IEEE 802.1 Q) protocol), the second tag corresponding to the non-cascading port in the first broadband access device is a VLAN Channel Identifier (VlanCI) tag, (the VLAN ID is referenced to a specific port: note that the port identifies that channel according to the associated database: col. 9 lines 40-45), and said message received from the non-cascading port is an Ethernet message, (fig. 4, Ethernet message 94 received at the port of the access device 92),*

(US 7,197,556 B1) teaches *the broadband access device is an IP DSLAM device, (fig. 4 element 92), except explicitly that the IP DSLAM device is composed of main control board, user interface board and backboard, and the method further comprises: the user interface board inserting the VlanCI tag into the received Ethernet message and the main control board inserting the VlanPI tag into the received Ethernet message,*

(US 7,194,554 B1) teaches For example, the access concentrator can be a digital subscriber line access multiplexer (DSLAM) for signals transmitted via regular telephone lines, a cable head end

(a Cable Modem Termination Shelf (CMTS)) for signals transmitted via coaxial cables, a wireless access point (WAP) for signals transmitted via a wireless network, a switch, or the like. Therefore It would have been obvious to a person of ordinary skill at the time the invention was made to implement (US 7,197,556 B1) with (US 7,194,554 B1) so that the (DSLAM) can be configured in different manners that would allow an interface to insertion of a tag into a received message.

Regarding claim 20, (US 7,197,556 B1) describes *a convergence layer device*, (fig. 4 element 84 is a convergence layer device), *and the first tag and the second tag are inserted, by the broadband access device (DSLAM), and the convergence layer device, into the message received from the non-cascading port.*

Regarding claim 21, (US 7,197,556 B1) describes *the first tag corresponding to the broadband access device is a VLAN Path Identifier (VlanPI) tag, and wherein the convergence layer device is capable of inserting the VlanPI tag of the device from which the message is transmitted, into the message without a VlanPI tag, and transferring the message according to the VlanPI tag and the destination MAC address carried in the message*, (fig.7 step 230 indicates the identification carried in the message for transmission).

Regarding claim 22, (US 7,197,556 B1) describes *the broadband access device is capable of independently inserting the first tag and the second tag into the message received from the non-cascading port, (DSLAM).*

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EMMANUEL MAGLO whose telephone number is (571)270-1854. The examiner can normally be reached on Monday - Thursday 7:00 - 4:30 and every other Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571)272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Emmanuel Maglo
Patent Examiner
July 17, 2009

/William Trost/
Supervisory Patent Examiner, Art Unit 2416